

Applicant: Matti Kemppainen et al.
PCT App. No.: PCT/FI2005/050030

Claim Listing

1–28. (cancelled)

29. (new) A method in reeling up, in which a paper web or the like is reeled around a center-driven reel spool and the reel spool is transferred from primary reeling to secondary reeling in which reeling the reel spool is transferred in accordance with the growth of the reel by means of a transfer device at least at some stage of the reeling and the web is brought at said stage from below the reel spool via a reeling nip formed by the reel spool and a loop of an endless supporting member, wherein during the reeling process, at least at some stage, an auxiliary nip is formed by means of the reel spool and a roll, via which auxiliary nip the web is guided around the reel spool.

30. (new) The method according to claim 29, wherein the web is guided around the reel spool during the reeling in the travel direction of the web in such a manner that the web is guided via the loop of the supporting member to the reeling nip and then to the auxiliary nip.

31. (new) The method according to claim 29, wherein the web is guided around the reel spool during the reeling in the travel direction of the web in such a manner that the web is guided via the periphery of the roll to the auxiliary nip and then to the reeling nip.

32. (new) The method according to claim 29, wherein the auxiliary nip is formed during the primary reeling.

33. (new) The method according to claim 32, wherein the auxiliary nip is also formed during the secondary reeling.

34. (new) The method according to the claim 29, wherein the auxiliary nip is formed by means of the roll for the duration of the threading of the web.

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35. (new) The method according to the claim 29, wherein the roll is arranged to function as a guiding roll for the web.

36. (new) The method according to the claim 29, wherein the reeling nip is formed below the surface of the reel spool defined by the horizontal diameter of the reel spool.

37. (new) The method according to the claim 29, wherein the auxiliary nip is formed above the surface of the reel spool limited by the horizontal diameter of the reel spool.

38. (new) The method according to claim 32, wherein during the secondary reeling a nip is formed by means of the reel and a press roll.

39. (new) The method according to claim 29, wherein the reel spool is transferred by means of the transfer device during the secondary reeling.

40. (new) The method according to claim 29, wherein the reel spool is transferred by means of the transfer device during the primary reeling.

41. (new) The method according to the claim 29, wherein in the axial direction the shell of the roll is at least as long as the width of the web in its cross direction, preferably the shells of the roll and the reel spool are equally long in the axial direction.

42. (new) The method according to the claim 29, wherein the primary reeling is adjusted by means of the nip force produced by the roll.

43. (new) The method according to claim 42, wherein the nip force produced by the roll is measured and the measurement result is transmitted to a control and adjustment unit in which a nip force control and adjustment message is formed.

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44. (new) The method according to the claim 29, wherein the primary reeling is adjusted by means of the torque of the roll.

45. (new) The method according to claim 44, wherein the torque of the roll is measured, and the measurement result is transmitted to the control and adjustment unit in which a torque control message is formed.

46. (new) The method according to the claim 29, wherein the reeling is adjusted by means of the surface draw of the paper web.

47. (new) A reel-up, which comprises means for reeling a paper web or the like around a center-driven reel spool, said means comprising:

a transfer device for transferring the reel spool in accordance with the growth of the reel from primary reeling to secondary reeling;
a loop of an endless supporting member; and
a reeling nip formed by means of the loop of the endless supporting member and the reel spool, wherein the web is arranged to be brought from below the reel spool via the reeling nip while transferring the reel spool by means of the transfer device, wherein the means for reeling comprise a roll which together with the reel spool form an auxiliary nip via which the web is guided around the reel spool.

48. (new) The reel-up according to claim 47, wherein the means for reeling comprise means both for primary and secondary reeling.

49. (new) The reel-up according to claim 47, wherein the roll together with the reel spool forms an auxiliary nip during the primary reeling.

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50. (new) The reel-up according to claim 49, wherein the roll together with the reel spool also forms an auxiliary nip during the secondary reeling.

51. (new) The reel-up according to claim 47, wherein in the shell of the roll is in the axial direction at least as long as the width of the web in its cross direction, preferably as long as the length of the shell of the reel spool in the axial direction.

52. (new) The reel-up according to claim 49, wherein the means for reeling comprise a press roll, which, together with the reel forms a nip during the secondary reeling.

53. (new) The reel-up according to the claim 47, wherein the transfer device is arranged to move the reel spool during the secondary reeling.

54. (new) The reel-up according to the claim 47, wherein the transfer device is arranged to move the reel spool during the primary reeling.

55. (new) The reel-up according to claim 47, wherein the reel-up is provided with a control and adjustment unit to adjust the reeling.

56. (new) The reel-up according to claim 47, wherein the auxiliary nip is arranged to be formed for the duration of the threading of the web.